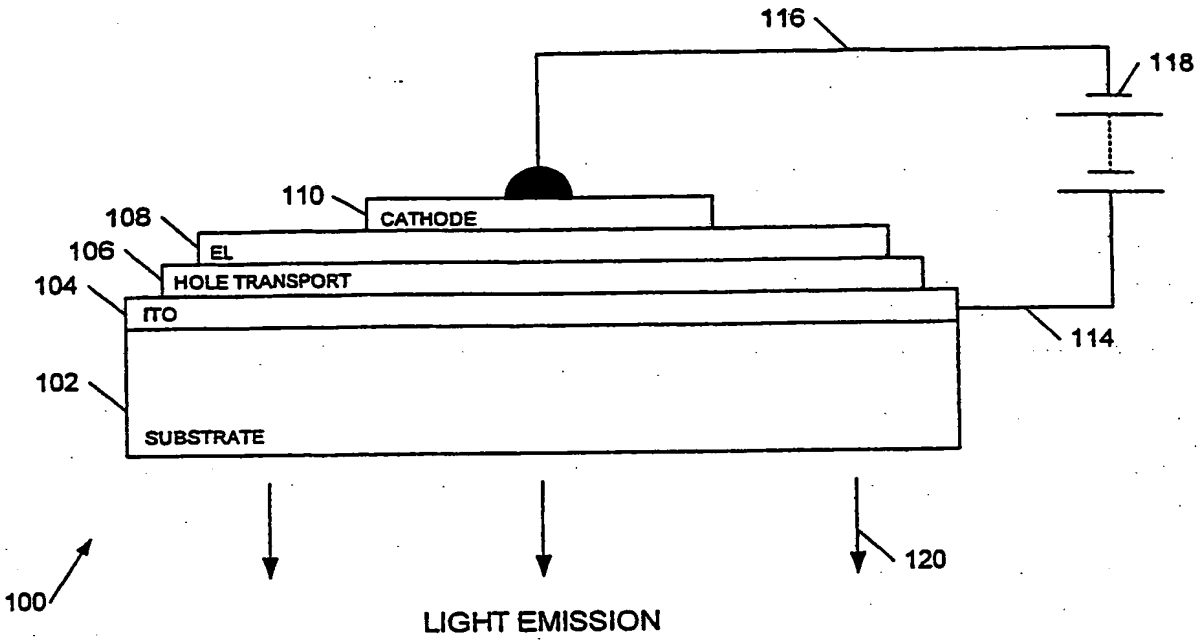

Figure 1a
(PRIOR ART)

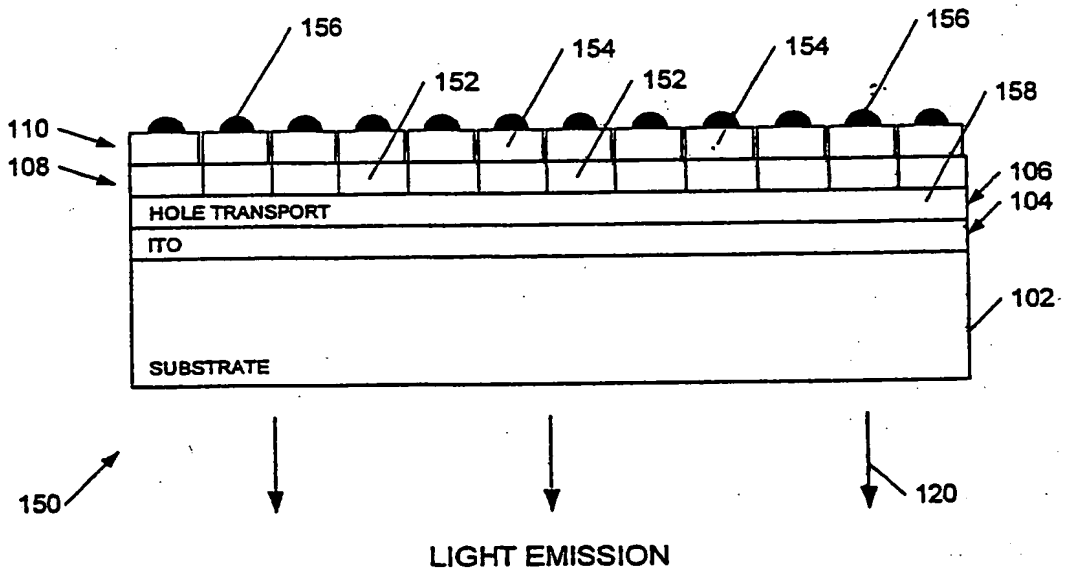

Figure 1b
(PRIOR ART)

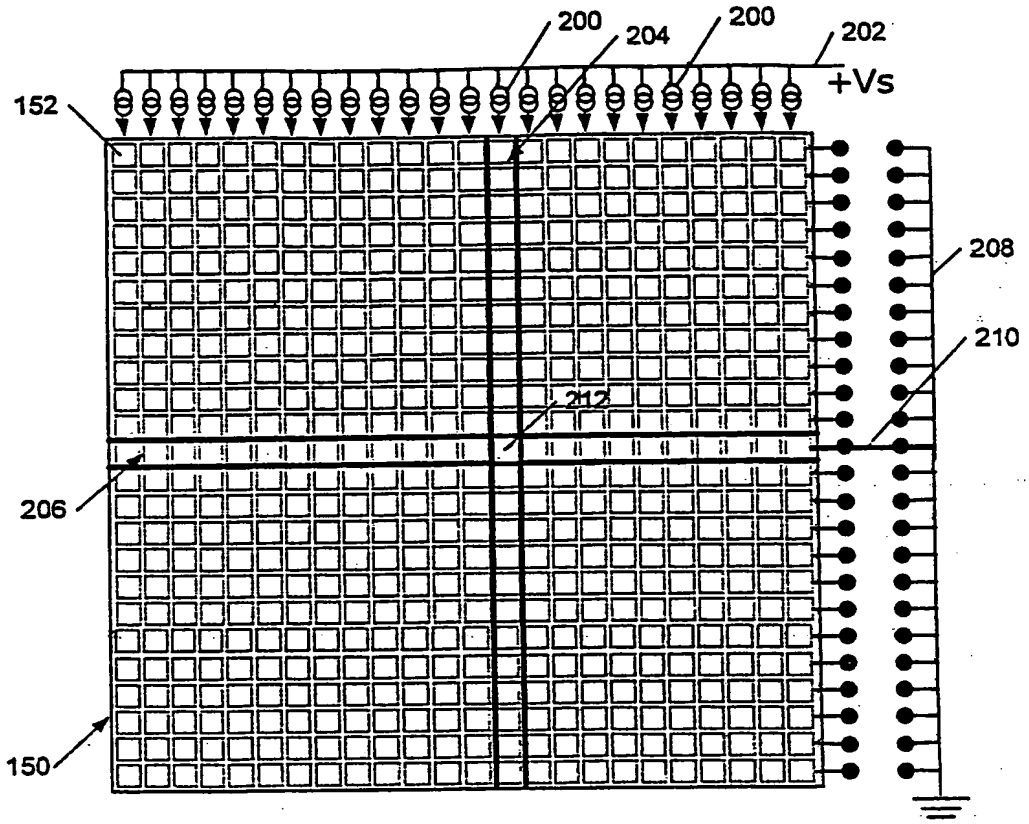

Figure 2a

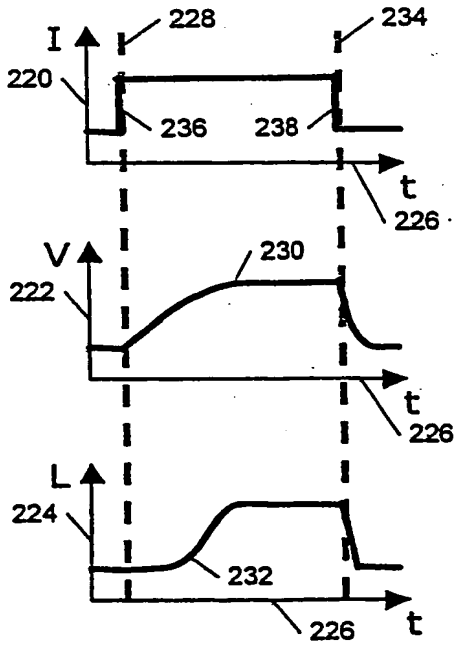

Figure 2b

Figure 2c

Figure 2d

BEST AVAILABLE COPY

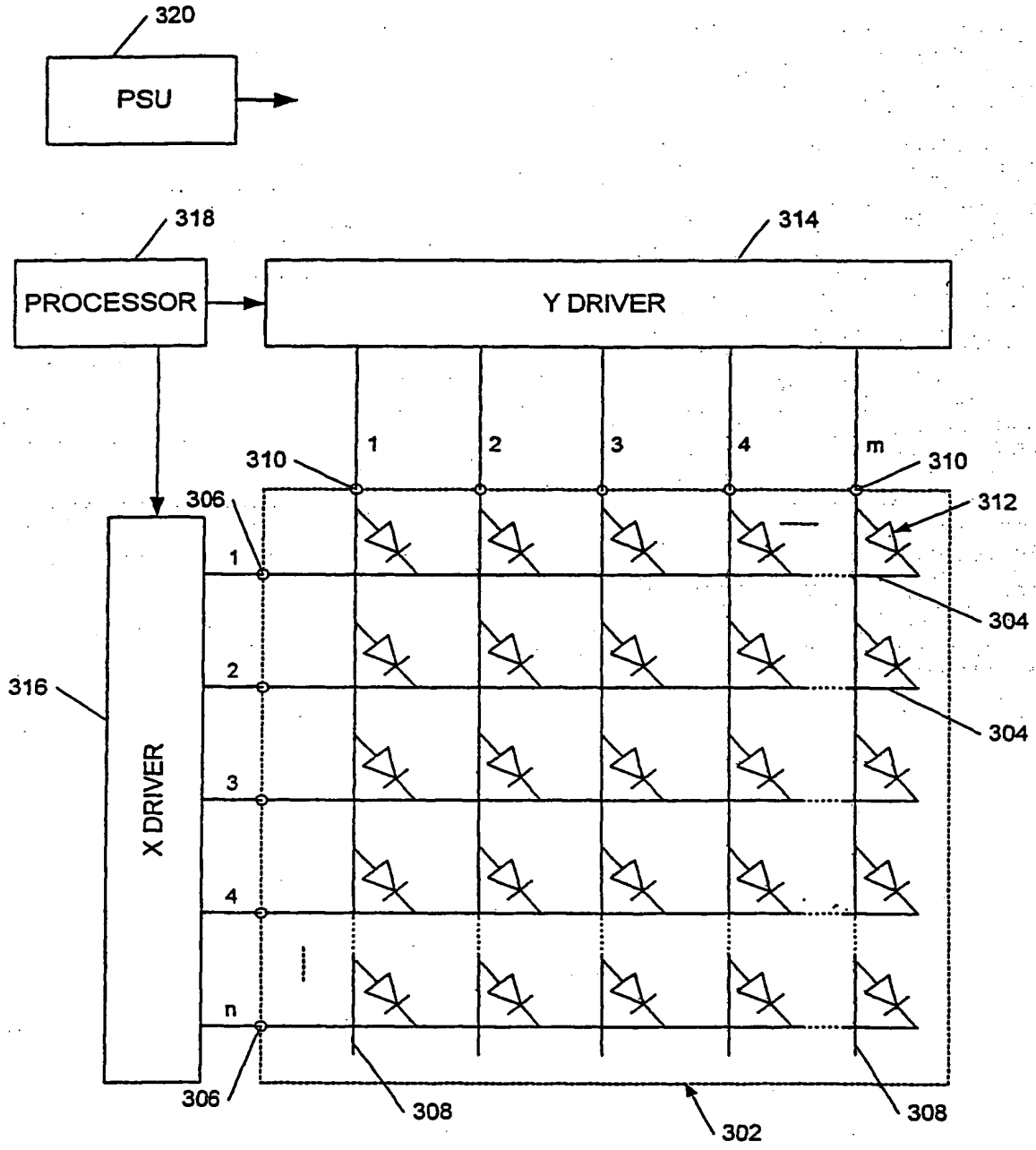

Figure 3
(PRIOR ART)

300

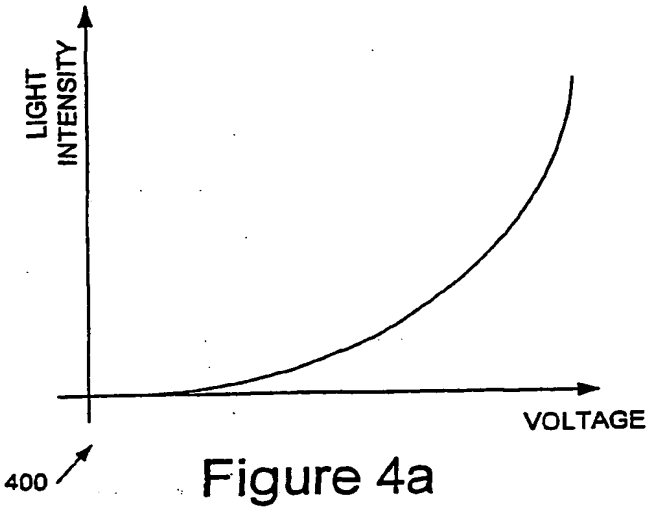

Figure 4a

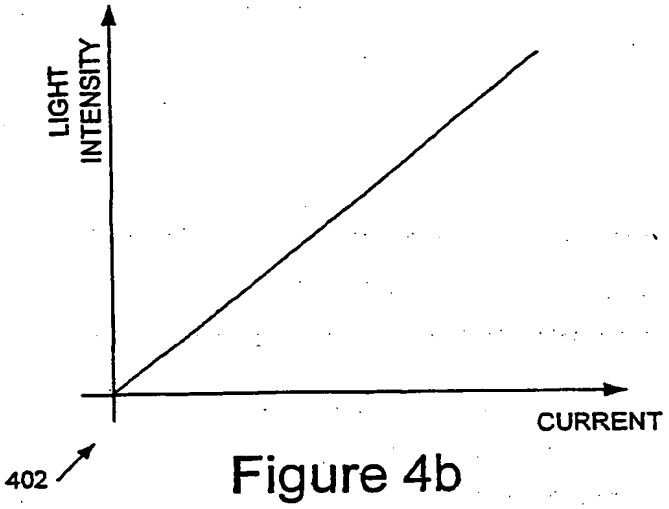

Figure 4b

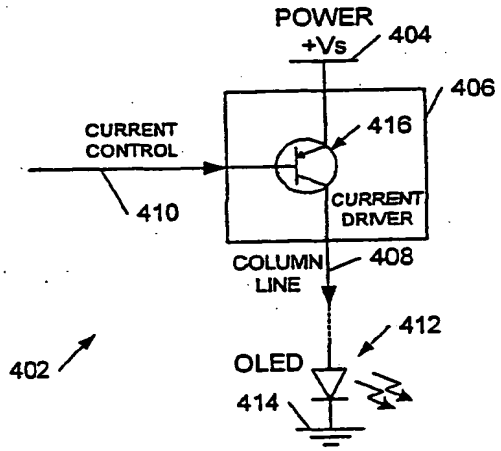

Figure 4c

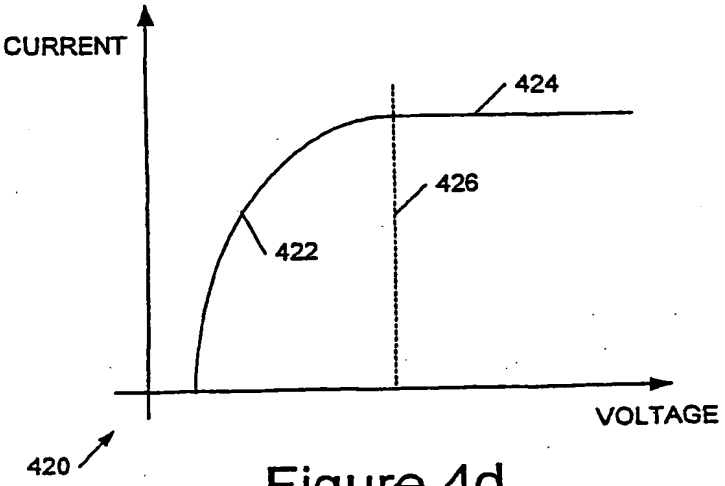

Figure 4d

5/10

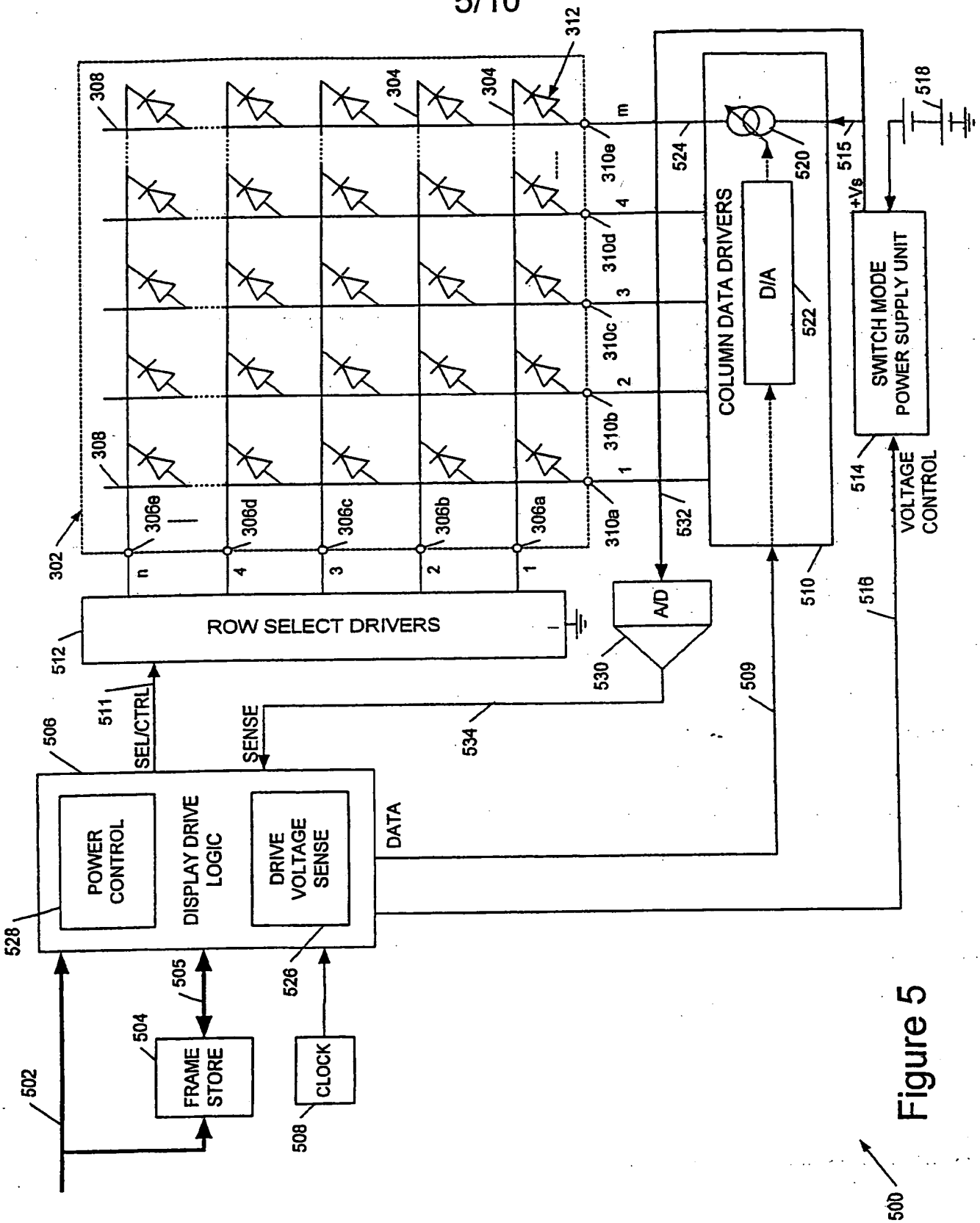
312
308
304
304
m
310e
4
310d
3
310c
2
310b
1
310a
524
520
515
518
+Vs
COLUMN DATA DRIVERS
D/A
522
SWITCH MODE POWER SUPPLY UNIT
514
VOLTAGE CONTROL
516
510
532
A/D
530
302
306e
306d
306c
306b
306a
n
4
3
2
1
ROW SELECT DRIVERS
512
511
SEL/CTRL
SENSE
534
509
506
POWER CONTROL
DISPLAY DRIVE LOGIC
DRIVE VOLTAGE SENSE
DATA
528
526
505
504
FRAME STORE
CLOCK
508
502
500

Figure 5

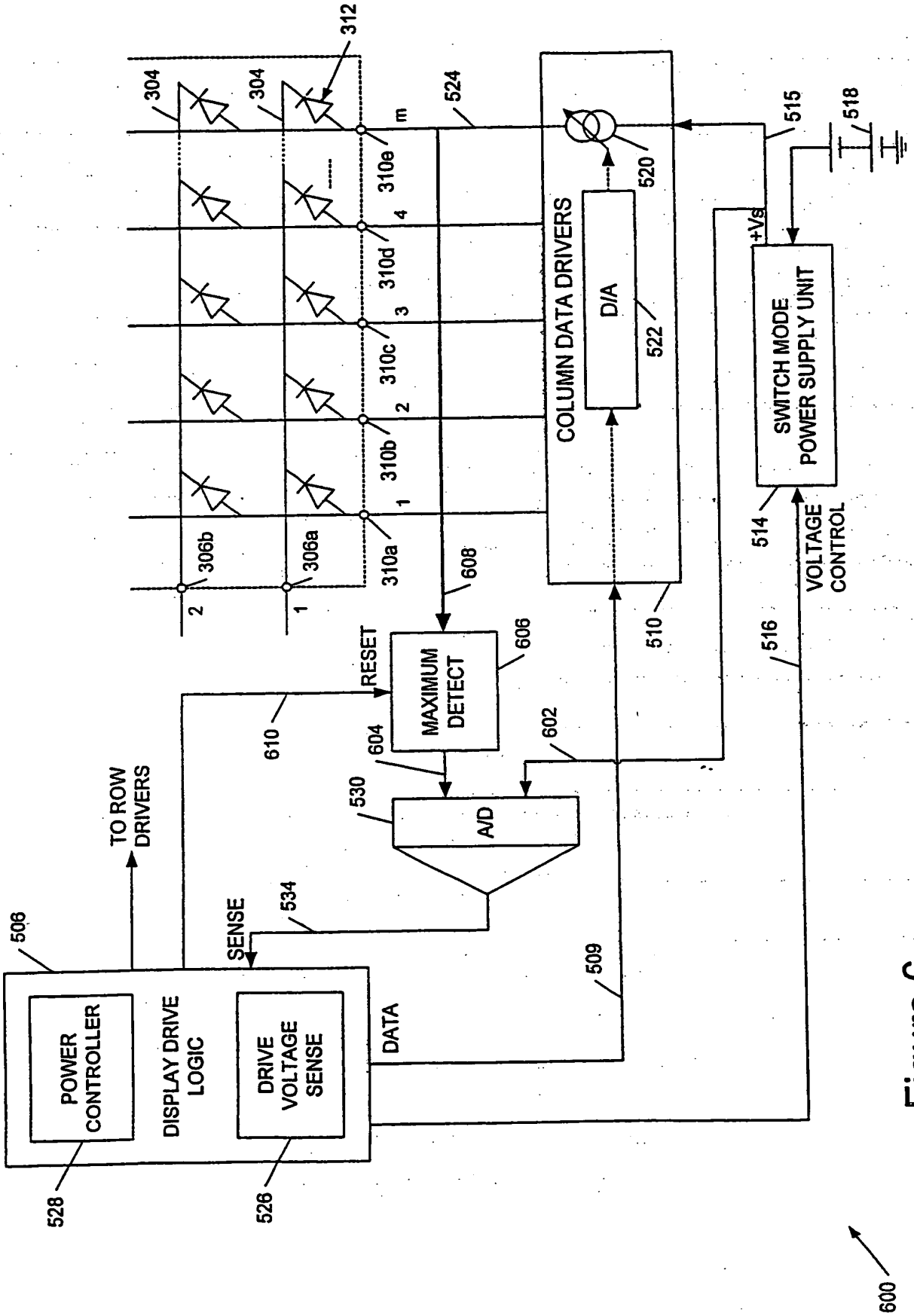
312
304
304
524
515
518
520
310e
m
4
310d
3
310c
2
310b
1
310a
306b
306a
2
1
COLUMN DATA DRIVERS
D/A
522
+Vs
SWITCH MODE POWER SUPPLY UNIT
514
VOLTAGE CONTROL
608
510
516
RESET
MAXIMUM DETECT
606
610
604
602
530
A/D
TO ROW DRIVERS
534
SENSE
506
509
DATA
POWER CONTROLLER
DISPLAY DRIVE LOGIC
DRIVE VOLTAGE SENSE
528
526
600

Figure 6

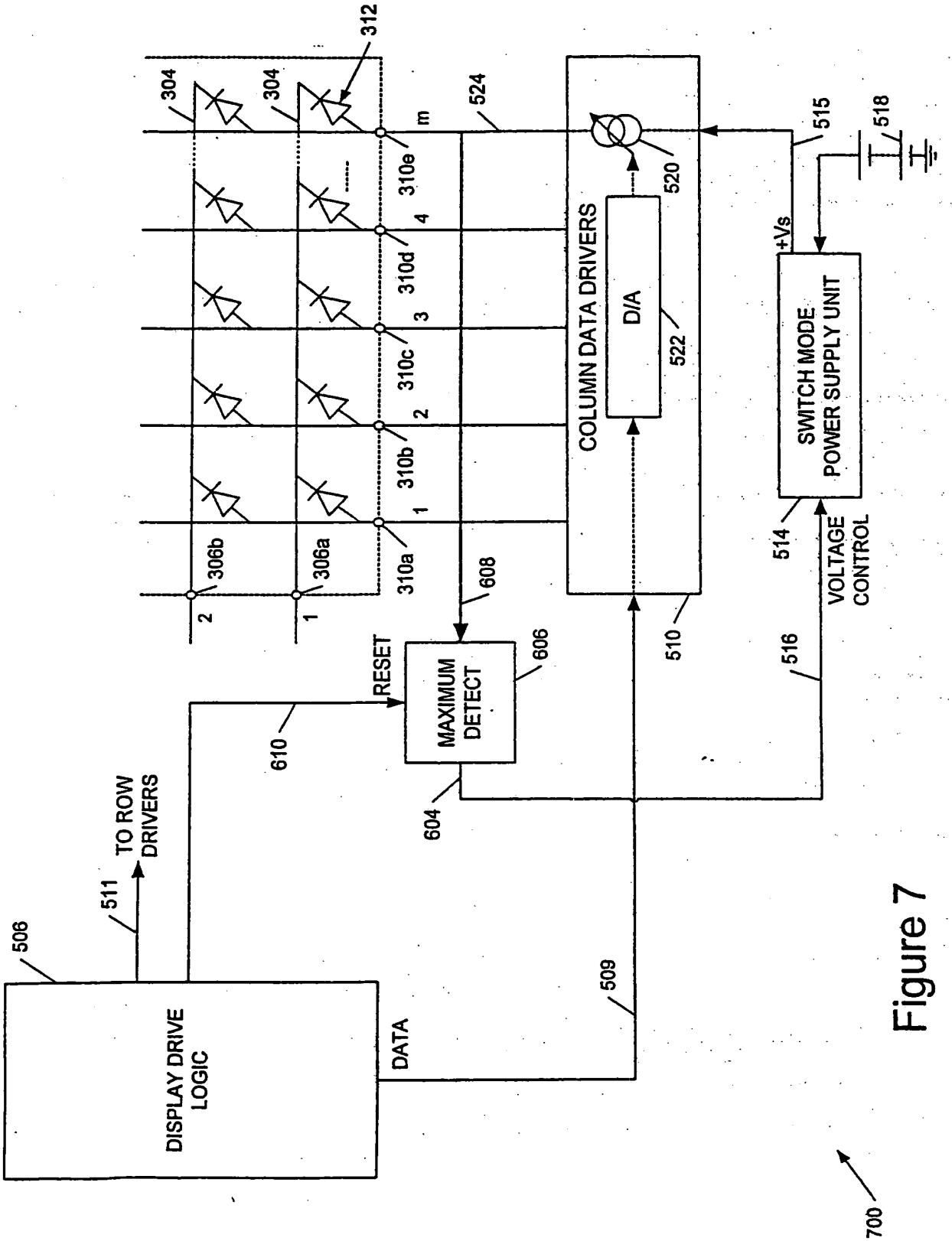
312
304
304
524
m
310e
4
310d
3
310c
2
310b
1
310a
306b
306a
2
1
COLUMN DATA DRIVERS
D/A
520
522
515
518
+Vs
SWITCH MODE POWER SUPPLY UNIT
514
VOLTAGE CONTROL
516
510
608
606
MAXIMUM DETECT
RESET
610
604
TO ROW DRIVERS
511
506
DISPLAY DRIVE LOGIC
DATA
509
700

Figure 7

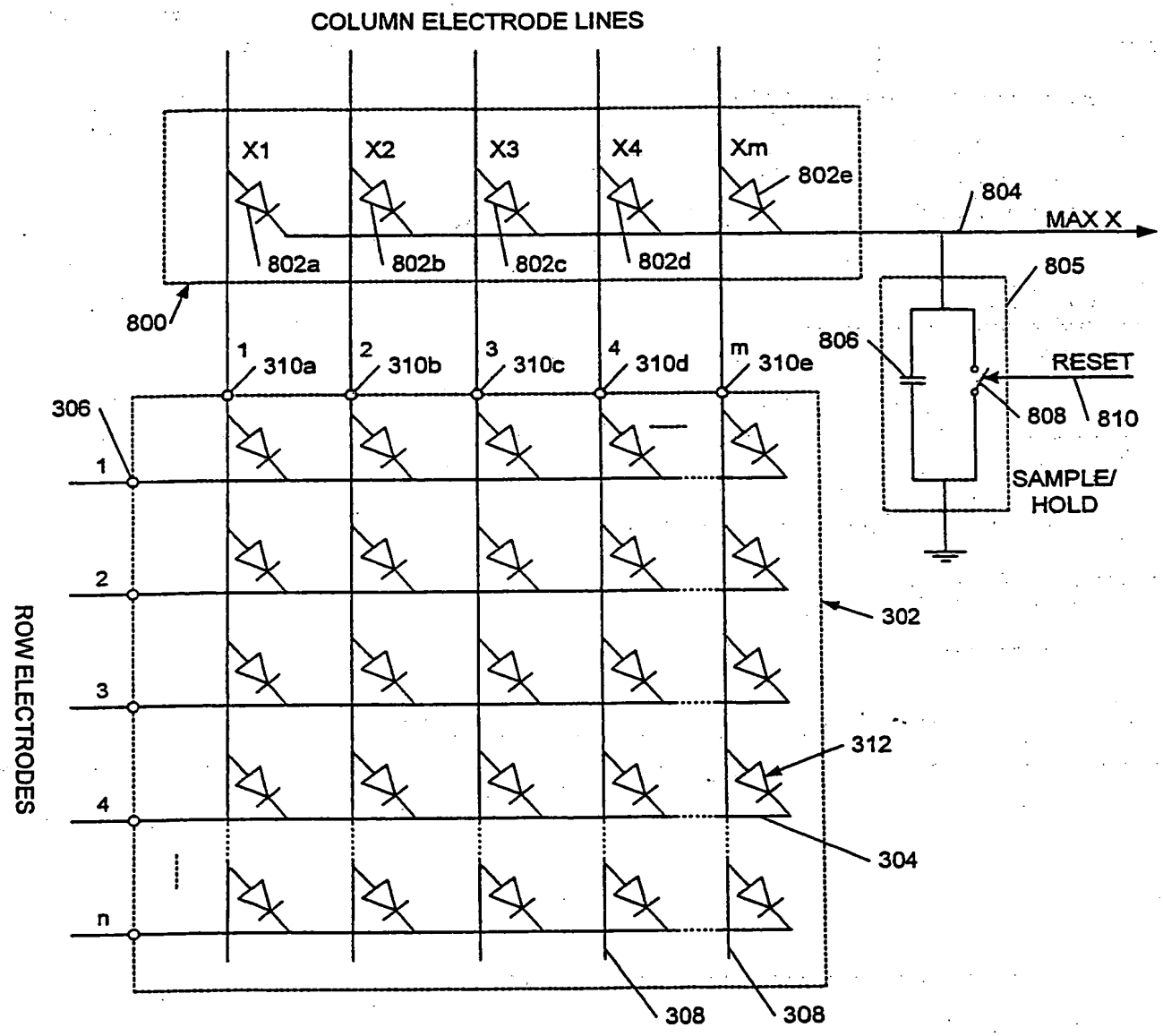
COLUMN ELECTRODE LINES
X1
X2
X3
X4
Xm
802e
804
MAX X
802a
802b
802c
802d
805
800
806
RESET
1
310a
2
310b
3
310c
4
310d
m
310e
808
810
306
SAMPLE/
HOLD
1
2
302
3
312
4
304
ROW ELECTRODES
n
308
308

Figure 8

9/10

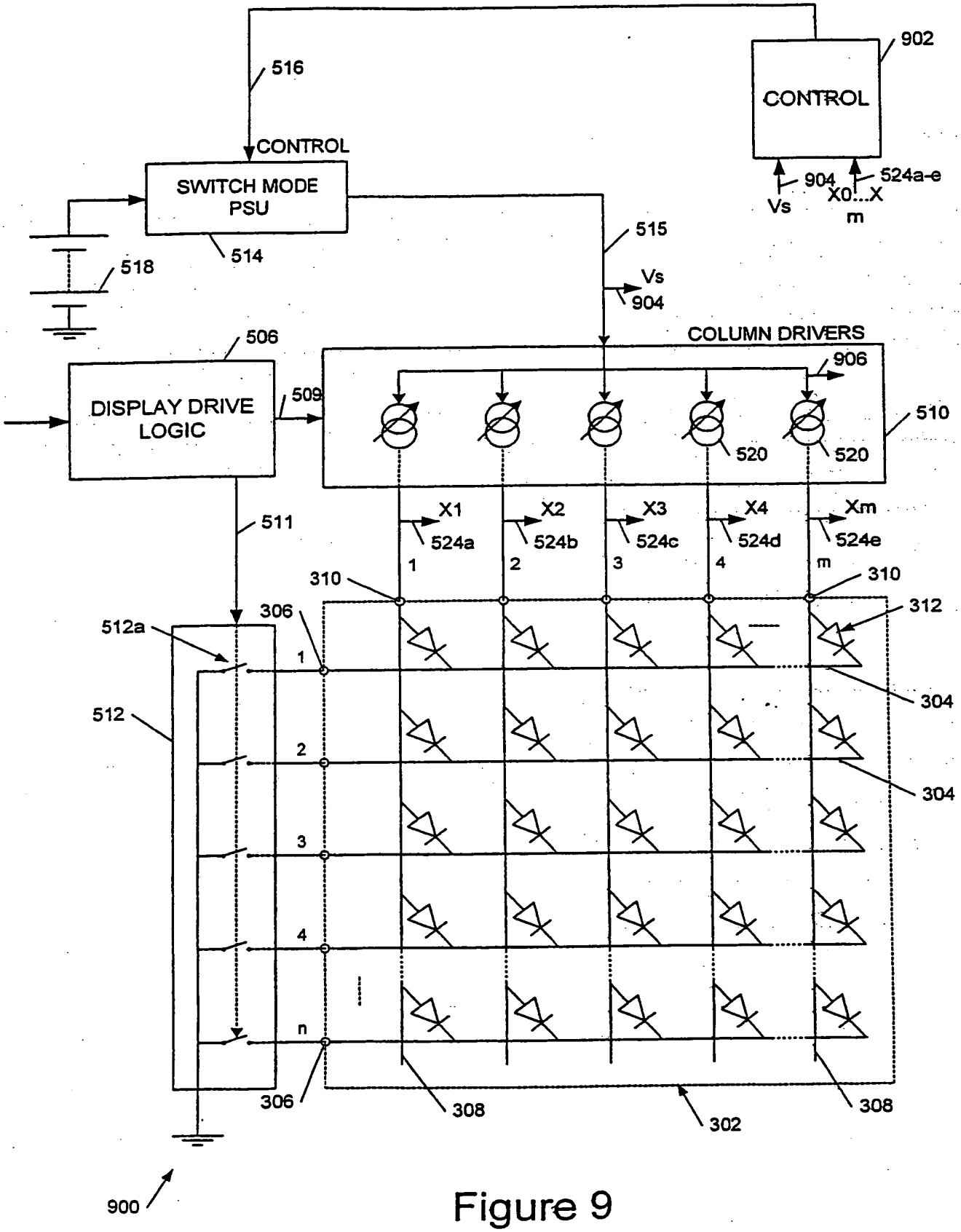
516
CONTROL
902
CONTROL
SWITCH MODE PSU
514
518
904
Vs
524a-e
X0...X
m
515
Vs
904
506
DISPLAY DRIVE LOGIC
509
COLUMN DRIVERS
906
510
520
520
511
X1
524a
X2
524b
X3
524c
X4
524d
Xm
524e
1
2
3
4
m
310
310
306
312
512a
512
304
304
306
308
308
302
900

Figure 9

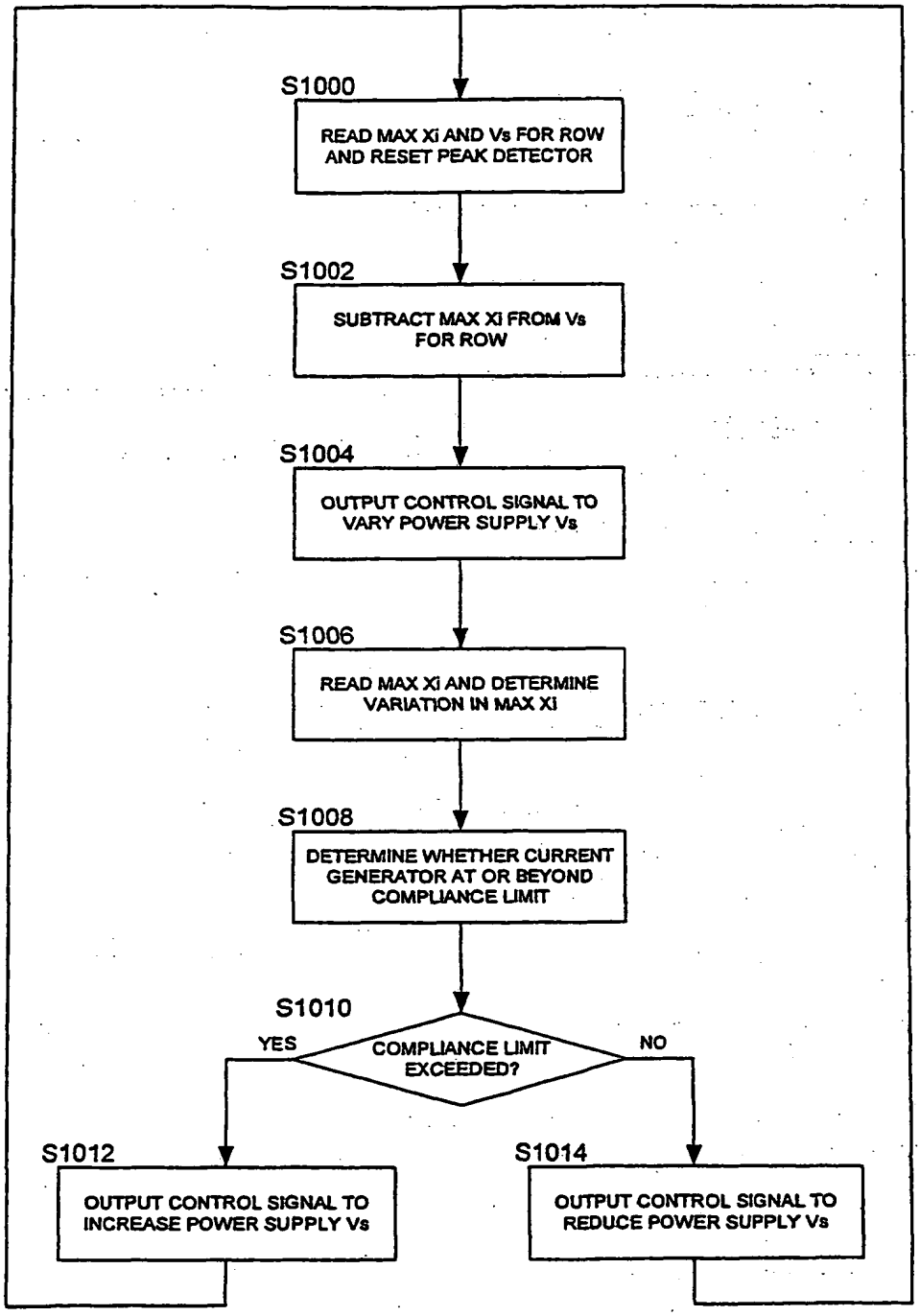
S1000
READ MAX Xi AND Vs FOR ROW AND RESET PEAK DETECTOR
S1002
SUBTRACT MAX Xi FROM Vs FOR ROW
S1004
OUTPUT CONTROL SIGNAL TO VARY POWER SUPPLY Vs
S1006
READ MAX Xi AND DETERMINE VARIATION IN MAX Xi
S1008
DETERMINE WHETHER CURRENT GENERATOR AT OR BEYOND COMPLIANCE LIMIT
S1010
COMPLIANCE LIMIT EXCEEDED?
YES
NO
S1012
OUTPUT CONTROL SIGNAL TO INCREASE POWER SUPPLY Vs
S1014
OUTPUT CONTROL SIGNAL TO REDUCE POWER SUPPLY Vs

Figure 10